WHAT IS CLAIMED IS:

1. A mechanically embossed single ply roofing membrane comprising: a top layer and a bottom layer permanently pressed into a single ply membrane wherein said bottom layer is mechanically embossed forming an embossment of alternating ridges and valleys therein.

2. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of pyramidal configuration having a rectangular base.

3. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of pyramidal configuration having a hexagonal base.

4. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of cone configuration having a circular or ellipsoidal base.

5. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of randomly spaced thread configuration running longitudinally in said single ply roofing membrane.

6. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of randomly spaced thread configuration running transversely in said single ply roofing membrane.

7. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment is of basket-weave configuration running longitudinally, or transversely in said single ply roofing membrane.

8. The mechanically embossed single ply roofing membrane of claim 1 wherein said top layer and said bottom layer is of a polyolefin.

9. The mechanically embossed single ply roofing membrane of claim 8 wherein said polyolefin is selected from the group consisting of polyethylene, polypropylene, terpolymers of ethylene, propylene and diene monomers, ethylene-propylene copolymers, ethylene-butane copolymers, ethylene-hexane copolymers, ethylene-octane copolymers, propylene-C_{4-8} alpha olefin copolymers, and metallocene polyolefins.

10. A mechanically embossed single ply roofing membrane comprising: a reinforcement scrim sandwiched between a top layer of polyolefin and a bottom layer of polyolefin permanently pressed into a single ply membrane wherein said bottom layer is mechanically embossed forming an embossment of alternating ridges and valleys therein.

11. The mechanically embossed single ply roofing membrane of claim 10 wherein said reinforcement scrim is of a material selected from the group consisting of fiberglass, polyester, fiberglass reinforced polyester, woven fabrics and non-woven fabrics.

12. The mechanically embossed single ply roofing membrane of claim 10 wherein about 0.5% to 20% w/w of a highly-flowable, functional polyolefin is incorporated into said top layer or said bottom layer to improve adhesion between said reinforcement scrim and said top layer and said bottom layer.

13. The mechanically embossed single ply roofing membrane of claim 12 wherein said highly-flowable, functional polyolefin is selected from the group consisting of maleic anhydride-modified polyolefin, epoxy-modified polyethylene and methacrylate therpolymers thereof.

14. The mechanically embossed single ply roofing membrane of claim 10 having a thickness of about 0.1 to 5 mm (4 to 200 mils).

15. The mechanically embossed single ply roofing membrane of claim 14 having a thickness of about 0.6 to 2.5 mm (25 to 100 mils).

16. The mechanically embossed single ply roofing membrane of claim 14 wherein said scrim having tenacity of 100 to 3000 denier.

17. The mechanically embossed single ply roofing membrane of claim 14 having a tensile strength of at least 80 pounds force per inch.

18. The mechanically embossed single ply roofing membrane of claim 1 wherein said embossment having a depth of about 0.01 to 2 mm (0.4 to 80 mils).

19. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of pyramidal configuration having a rectangular base.

20. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of pyramidal configuration having a hexagonal base.

21. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of cone configuration having a circular or ellipsoidal base.

22. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of randomly spaced thread configuration running longitudinally in said single ply roofing membrane.

23. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of randomly spaced thread configuration running transversely in said single ply roofing membrane.

24. The mechanically embossed single ply roofing membrane of claim 10 wherein said embossment is of basket-weave configuration running longitudinally, or transversely in said single ply roofing membrane.

25. The mechanically embossed single ply roofing membrane of claim 10 wherein said polyolefin is selected from the group consisting of polyethylene, polypropylene, terpolymers of ethylene, propylene and diene monomers, ethylene-propylene copolymers, ethylene-butane copolymers, ethylene-hexane copolymers, ethylene-octane copolymers, propylene-C_{4-8} alpha olefin copolymers, and metallocene polyolefins.

26. A method of making a mechanically embossed reinforced single ply roofing membrane comprising:

providing a scrim or reinforcement sheet having top and bottom surfaces;

depositing a coating in a molten state on said top and bottom surfaces of said scrim or reinforcement sheet;

embossing said bottom surface with a pattern of ridges and valleys; and

solidifying the molten coating on the top and bottom surfaces of said scrim or reinforcement sheet.

27. A method of making a mechanically embossed non-reinforced single ply roofing membrane comprising:

extruding/calendaring a molten polyolefin sheet

embossing bottom surface of said non-reinforced sheet with a pattern of ridges and valleys; and

solidifying the molten non-reinforced sheet.

28. The method of claim 26 wherein said coating is a polyolefin.

29. The method of claim 27 wherein said sheet is a polyolefin.

30. A method of installing a mechanically embossed single ply roofing membrane on a roof deck comprising the steps of:

providing the roofing membrane of claim 1 in a roll form;

unrolling a desired length of said roofing membrane at the site of installation;

fully adhering or mechanically attaching the single ply roofing membrane on a roof deck; and

continuing the process to complete the coverage of the roof deck.

31. A method of installing a mechanically embossed single ply roofing membrane on a roof deck comprising the steps of:

providing the roofing membrane of claim 10 in a roll form;

unrolling a desired length of said roofing membrane at the site of installation;

fully adhering or mechanically attaching the single ply roofing membrane on a roof deck; and

continuing the process to complete the coverage of the roof deck.